

Attachment K2-7

Next page: Excerpt from the Fact Sheet attached to the current Phillips 66 Rodeo Refinery NPDES permit, Region 2 Regional Water Quality Control Board Order R2-2010-0027 reissued 11 May 2011, including the feedstock rates for determining BAT limitations (actual throughputs) for hydrocracking units, the coking unit, and certain other types of process units at the Rodeo Facility.

Following pages: Excerpts from Table IIA of the Title V Permit for the Phillips 66 San Francisco Refinery, Rodeo Facility; Facility # A0016, revised by the Bay Area Air Quality Management District on 1 August 2014. These excerpts show Title V Permit maximum allowable capacities for hydrocracking units (Air District source numbers S# 307 and S# 434) and for the coking unit (Source S# 300) at the Rodeo Facility.

Because the BAT limits for phenolic compounds, total chromium, and hexavalent chromium are different than the BPT limits, they must be calculated separately to determine whether they are more stringent. The limits are based on feedstock rates for several processes multiplied by effluent limitation factors. The processes include crude, cracking and coking, lube, and reforming and alkylation, which correspond to the processes identified in the *Guide for the Application of Effluent Limitations Guidelines for the Petroleum Refining Industry* (page 20). The table below shows the feedstock rates for these processes.

Table F-1C. Feedstock Rates for Determining BAT Limitations

Process	Feedstock Rate
Crude	
Atmospheric Distillation	94.66
Vacuum Distillation	54.22
Desalting	31.78
Total	180.66
Cracking and Coking	
Hydrocracking	51.75
Delayed Coking	25.45
Hydrotreating	66.69
Total	143.89
Lube	
Total	--
Reforming and Alkylation	
Catalytic Reforming	29.40
Total	29.40

The following table shows the derivation of the BAT limits for phenolic compounds, total chromium, and hexavalent chromium based on the total feedstock rates above.

Table F-1D. BAT Limitations for Process Wastewater (Phenolic Compounds, Total Chromium, and Hexavalent Chromium)

Pollutant	Preliminary Effluent Limits Factor ^[a]		Feedstock Rate	Effluent Limits (pounds/day)	
	Max Daily	Avg Monthly		Max Daily	Avg Monthly
<i>Phenolic Compounds</i>					
Crude	0.013	0.0030	180.66	2.35	0.54
Cracking and Coking	0.147	0.036	143.89	21.15	5.18
Reforming and Alkylation	0.132	0.032	29.40	3.88	0.94
Limit (Sum)	--	--	--	27.38	6.66
<i>Total Chromium</i>					
Crude	0.011	0.004	180.66	1.99	0.72
Cracking and Coking	0.119	0.041	143.89	17.12	5.90
Reforming and Alkylation	0.107	0.037	29.40	3.15	1.09
Limit (Sum)	--	--	--	22.26	7.71

II. Equipment

Table II A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

S#	Description	Make or Type	Model	Capacity
194	Tank 306	fixed roof	dye	2,000 gal
195	Water Treatment Sludge Tank T-501	fixed-roof	sludge	2,500 bbl
196	Water Treatment Sludge Tank T-502	fixed-roof	sludge	2,500 bbl
216	Tank 695	external floating roof	naphtha	2.0 million gal
239	Stripped Foul Water Tank T-212	fixed-roof	sour water	10,000 bbl
254	Tank 1001	external floating roof	gasoline	104 thousand bbl
255	Tank 1002	external floating roof	gasoline	104 thousand bbl
256	Tank 1003	external floating roof	gasoline	104 thousand bbl
257	Tank 1004	internal floating roof tank with dome roof	gasoline	104 thousand bbl
258	Tank 1005	internal floating roof tank with dome roof	gasoline	104 thousand bbl
259	Tank 1006	external floating roof	gasoline	104 thousand bbl
261	Tank 1010	external floating roof	naphtha, distillate oil	104 thousand bbl
294	Non-Retail Gasoline Dispensing Facility (GDF 7609 – 1 nozzle)	phase I / II vapor recovery	EW A4000	15,000 gal underground tank
296	C-1 Flare (main refinery flare, elevated, steam-assisted, serves S304, S305, S306)	Callidus		845 ton/hr gas handling capacity, 6.6 MMbtu/hr pilot
300	U200 Delayed Coker	delayed coker	NA	81,000 bbl/day
301	Molten Sulfur Pit 234	NA	NA	271 long ton/day for S301, S302, S303
302	Molten Sulfur Pit 236	NA	NA	271 long ton/day for S301, S302, S303
303	Molten Sulfur Pit 238	NA	NA	271 long ton/day for S301, S302, S303
304	Light Naphtha Hydrotreater	NA	NA	12,198 bbl/day
305	U230 Prefractionator/Naphtha Hydrotreater	NA	NA	28,000 bbl/day
306	U231 Platforming Unit	NA	NA	21,000 bbl/day
307	U240 Unicracking Unit	NA	NA	42,000 bbl/day
308	U244 Reforming Unit	NA	NA	16,087 bbl/day
309	U248 UNISAR Unit	NA	NA	16,740 bbl/day
318	U76 Gasoline/Mid Barrel Blending Unit	NA	NA	113,150 bbl/day petroleum fluids except diesel, No daily limit for diesel
319	U215 Gasoline Fractionating Unit	NA	NA	9,600 bbl/day

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S#	Description	Make or Type	Model	Capacity
376	Tool Room Cold Cleaner	Build-All	DM-32	29 gal
377	Machine Shop Cold Cleaner	Build-All	DM-32	29 gal
378	Auto Shop Cold Cleaner	Snap-On	DM-226	18 gal
380	Activated Carbon Silo (P-204)			50,000 lb
381	Aeration Tank, Pact (F-201)	wastewater	100 ft dia	1.2 million gal
382	Aeration Tank, Pact (F-202)	wastewater	100 ft dia	1.2 million gal
383	Clarifier, F-203	wastewater	95 ft dia	0.69 million gal
384	Clarifier (F-204)	wastewater	95 ft dia	0.69 million gal
385	Media Filter (F271-F278)	wastewater		420 thousand gal/hr
386	PAC Regeneration Sludge Thickener (F-211)		25 ft dia	44,000 gal
387	Wet Air Regeneration (P-202)	Zimpro		15 gpm
388	Water Treatment Sludge Tanks (T276, F205)	30 ft dia by 24 ft 12 ft dia by 24 ft		3,500 bbl
389	Diatomaceous earth silo (F-214)			40,000 lb
390	F-106 Thickened Sludge Storage	15 ft diameter open tank		38,000 gal
392	Regenerated PAC Slurry Storage Tank F-266	fixed roof		42,000 gal
398	MP-30 Flare (backup refinery flare, elevated, steam-assisted, serves S304, S305, S306)	John Zink	Q5-48C	845 ton/hr gas handling capacity, 3.1 MMbtu/hr pilot
400	Wet Weather Wastewater Sump (with vented cover)	32 ft x 36 ft x 23 ft deep		175 thousand gal
401	Dry Weather Wastewater Sump (with vented cover)	33 ft x 25 ft x 26 ft deep		150 thousand gal
425	Marine Loading Berth M1	2 permitted arms		Products: 25,000 bbl/day annual average for S425, S426 total; Crude oil or gas oil: 51,182 bbl/day annual average for S425, S426 total
426	Marine Loading Berth M2	4 permitted arms		Products: 25,000 bbl/day annual average for S425, S426 total; Crude oil or gas oil: 51,182 bbl/day annual average for S425, S426 total
432	U215 Deisobutanizer			7,600 bbl/day
433	MOSC Storage Tank	fixed roof		30,000 gal
434	U246 High Pressure Reactor Train (Cracking)			23,000 bbl/day
435	Reformate Splitter			18,100 bbl/day
436	Deisopentanizer			13,400 bbl/day